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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/026,171

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Agapios K. Agapiou

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EXAMINER

MCDONOUGH, JAMES E

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

04/01/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/026,171	<b>Applicant(s)</b> AGAPIOU ET AL.	
	<b>Examiner</b> JAMES E. MCDONOUGH	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-10,14-22 and 24-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-10, 14-22, and 24-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/26/09 has been entered.

**Original Rejections*****Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3, 5-10, 14-15, 18-22 and 24-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uwai (USP 6,420,501) as cited in and for the reasons of record given in paragraph 5 of the Office action dated 11/14/2006 and the reasons below.

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Regarding claims 1, 3, 6-10, 14, 18-22, 24-32, and 34-38.

Uwai teaches (table 1) that the metallocenes and activator can be combined at temperatures up to 100 C and for times up to 60 minutes.

With respect to the temperature of step (b) of 30-75 C. It is noted that Uwai teaches a temperature for this step of 100 C, although this temperature is 25 C higher, the claimed temperature would have been the result of routine experimentation by one of ordinary skill in the art in an effort to optimize the catalyst activity while reducing reactor fouling by taking into consideration the polymerization parameters (i.e. time, temperature, reactor type, pressure, etc.). It is further noted however that the addition of one component that is up to 125 C to another components that is up to 75 C, will result in a new composition with a temperature higher than 75 C, assuming equal heat capacities and equal volume solutions the resultant temperature would actually be 100 C.

With respect to the activity of the catalyst prepared by a certain method it is noted that this is only shown for some organometal compounds and not all (i.e. see examples 15 and 16 of the instant specification).

Regarding claim 5

The solubility of a catalyst in toluene is a property of the catalyst and as such is inseparable from the catalyst itself, and since the reference discloses catalyst that read on the instant invention, it would be expected to have these properties absent any evidence to the contrary.

Regarding claim 15

Uwai teaches drying the solid catalyst (column 17, lines 64-67).

Regarding claim 33

Although, Uwai does not teach the claimed drying temperature, Uwai does disclose drying the product, however, the claimed drying temperature would have been the result of routine experimentation by one of ordinary skill in the art in an effort to optimize the catalyst activity while reducing reactor fouling by taking into consideration the polymerization parameters (i.e. time, temperature, reactor type, pressure, etc.), absent any showing of unexpected results.

Claims 16 and 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Uwai (USP 6,420,501) as applied to claims 1, 3, 5-10, 14-15, 18-22 and 24-38 above, and further in view of Lee et al. (USP 5,367,037).

Although, Uwai is silent as to whether the catalyst is reslurried in mineral oil, Uwai does disclose/suggest the rest of the limitations of the claims, however, because Lee teaches that it is preferable to add the catalyst as either a solid or a mineral oil slurry, it would have been prima facie obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Uwai, by incorporating the catalyst as a mineral oil slurry, as suggested by Lee, with a reasonable expectation of success.

### **Response to Arguments**

Applicants argue against the 103 rejection over Uwai.

Applicants argue that their method enable an identical catalyst made by their method to have an activity that is at least a 38.9 % greater, than the identical catalyst made without heating step (a) 75-125 C for 30 minutes to 3 hours, and step (b) at 3-75 C. This is not persuasive because applicants do not show this to be the case, and actually

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looking at examples 15 and 16 of the instant specification we can clearly see that with some organometal compounds this trend is reversed (i.e. see examples 15 and 16 of the instant specification. It is also noted by the examiner that the examples of the instant specification teach mixing then heating and not this claimed pre-heating (see examples 9-16 of the instant specification).

Applicants argue against the 103 rejection over Uwai in view of Lee.

These arguments have been fully considered but are not persuasive for the same reason given above.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES E. MCDONOUGH whose telephone number is (571)272-6398. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael A Marcheschi/

Primary Examiner, Art Unit 1793